



State of Utah  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

Michael O. Leavitt  
Governor

Ted Stewart  
Executive Director

James W. Carter  
Division Director

355 West North Temple  
3 Triad Center, Suite 350  
Salt Lake City, Utah 84180-1203  
801-538-5340  
801-359-3940 (Fax)  
801-538-5319 (TDD)

Mine Site

April 4, 1994

Frederick D. Fox, Director  
Environmental Affairs  
Kennecott Utah Copper  
P. O. Box 525  
Bingham Canyon, Utah 84006-0525

Re: Land Application of Municipal Biosolids Proposal, Kennecott Utah Copper,  
Bingham Canyon Mine - Tailings Impoundment, M/035/002, Salt Lake County,  
Utah

Dear Mr. Fox:

Thank you for your March 2, 1994, letter requesting Division review and approval of Kennecott Utah Copper's (KUC) proposal entitled; *Demonstration Project for the Land Application of Municipal Biosolids*. The proposal outlines a strategy for applying biosolids under a controlled experimental reclamation practice to selected areas of KUC's Magna tailings impoundment. The Division is prepared to approve of this reclamation proposal with the following conditions:

1. Potassium (K) needs to be added to the proposed soil and biosolids analytical list. These chemical analyses should also be performed initially on the co-compost to be added to the test plots. All monitoring data should be submitted to the Division either as a separate monitoring report or as part of the annual mine report.
2. The proposed seed mix does not provide for much diversity. It is suggested that the following species be added:

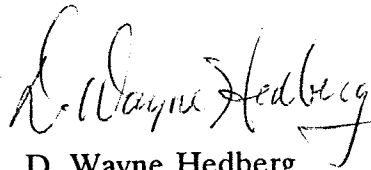
Small burnett	<i>Sanguisorba minor</i>	2.0 lbs.
Intermediate wheatgrass	<i>Agropyron intermedium</i>	2.0 lbs.
Great basin wildrye	<i>Elymus cinereus</i>	2.0 lbs.
Basin big sagebrush	<i>Artemisia tridentatat.</i>	0.5 lbs.
Rubber rabbitbrush	<i>Chrysothamnus tridentata</i>	0.5 lbs.
4-wing saltbush	<i>Atriplex canescens</i>	2.0 lbs.
Forage Kochia	<i>Kochia prostrata</i>	1.0 lbs.

With these additions, the rates for the other species listed on Table 1 could be reduced to 1/2 the stated rate.

Page 2  
Frederick D. Fox  
M/035/002  
April 4, 1994

Thank you for your continued efforts and willingness to develop and implement workable and innovative reclamation solutions to resolve the oftentimes difficult and complex reclamation challenges facing the mining industry. Please contact me or Lynn Kunzler of the Minerals staff, should you have questions or concerns regarding this review.

Sincerely,

A handwritten signature in cursive script, reading "D. Wayne Hedberg". The signature is written in dark ink and is positioned above the printed name.

D. Wayne Hedberg  
Permit Supervisor  
Minerals Regulatory Program

vb  
cc: Lisa Rogers, DWQ  
Lowell Braxton, DOGM  
Minerals staff (route)  
M035002.bio